Corporate Finance Department
Purchasing Division

3-2026 ADDENDUM 2

2026 DOWNTOWN PAVEMENT RENEWALS – ST. MARY AVE, EDMONTON ST, AND KENNEDY ST

ISSUED: Feb 18, 2026
BY: Scott Suderman, P.Eng.
TELEPHONE NO. 204 782-7189

URGENT

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID/PROPOSAL

THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID/PROPOSAL AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

Template Version: Addendum 2026-02-03

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.

FORM B: PRICES

Replace: 3-2026 Form B: Prices with 3-2026 Addendum 2 - Form B: Prices (R1). The following is a summary of changes incorporated in the replacement Bid/Proposal Submission:

Form B(R1): Added St. Mary and Vaughn traffic signals in Section E

Revised items in Section F for the St. Mary Ave watermain

Removed one tree planting on Kennedy St in Section G

Revised all quantities for street lighting in Section H

Page numbering on some forms may be changed as a result.

PART B – BIDDING PROCEDURES

Revise: B2.1 to read: The Submission Deadline is 12:00 noon Winnipeg time, March 6, 2026.

PART D – SUPPLEMENTAL CONDITIONS

Add: D17.2 (s) Manitoba Hydo Temporary Street Lighting and Existing Street Lighting Removal – Prior to the Contractor mobilizing Manitoba Hydro will install temporary lights on the north side of St. Mary Ave from Memorial Blvd to Edmonton St and remove the existing lights on the south boulevard of St. Mary Ave. Manitoba Hydro will also relocate the street lights on the west side of Edmonton St near the Convention Centre from the back of curb to the property line. All of these temporary lights will have overheads strung. The purpose of these temporary lights is to facilitate the Contractor's excavation and slip-form paving operations.

All existing lighting impacted by this project will be removed by Manitoba Hydro for salvage.

Add: D17.2 (t) Manitoba Hydro Gas Valves – There are approximately six gas valves within the project area. Work around these valves require a safety watch.

Add: D17.2 (u) Manitoba Hydro Power Connections for Street Lighting – The Consultant and the City are currently working with Manitoba Hydro to determine the location and type of power connections. The power connection might be shared between Traffic Signals and The Street Lighting to a common kiosk. The preliminary design drawings do not demonstrate an approved power connection. The City will arrange for the power connection with Manitoba Hydro.

PART E – SPECIFICATIONS

Revise: E33.4.4 to read: Base Course and Backfill Material: "*A"-Base* – do not use limestone.

	Sieve Designation	% Passing
i)	19mm	100
ii)	4.75mm	35-70
iii)	0.425mm	15-30
iv)	0.075mm	6-17

Revise: E33.7.1 to read: The construction of structural cell system shall be measured on a lump sum basis as accepted by the Contract Administrator for "Structural Soil Cell System" inclusive of excavation, sub grade compaction, drainage material, "*A"-base material*, silva cell system, root barrier, impervious liner, geogrid, cable ties, geotextile, anchor spikes, and non-woven geotextile. Price shall be payment in full for supplying materials and for performing the Work in accordance with this Specification and accepted and measured by the Contract Administrator.

Revise: E35.4.2 to read: Clay Pavers
(a) Endicott Clay Paver (92mm X 57mm X 194mm)- Dark Ironspot https://endicott.com/ or Yankee Hill Brick (92mm X 57mm X 194mm)- Dark Ironspot http://yankeehillbrick.com/
(b) Endicott thin set clay pavers from stockpile.

Revise: E35.5.1 to read: All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection and production of materials, through to final acceptance of the work. The Contract Administrator reserve the right to reject any materials or works that are not in accordance with the requirements of this specification.

Revise: E37.3.2. to read: (a) Digital proofs: Submit ¼ scale full colour digital proofs of all wayfinding signs for sign off by Contract Administrator.

Revise E38.3.2 to read: (a) Type 1: Hoop style surface mounted bike racks, powdercoated black. Bike racks available from Rackworks ph. 204-955-5221, or approved equal.

Revise: E41.20.2: (a) Trees

(i) Deciduous Trees

Replace: E53. **INSTALLATION OF STREET LIGHTING AND ASSOCIATED WORKS**

E53.1 GENERAL REQUIREMENTS

E53.1.1 The specifications covering the General Conditions of the Contract, General Specifications, and all associated sections form an integral part of this specification and shall be read in conjunction herewith.

E53.2 SCOPE OF WORK

E53.2.1 The Work shall consist of all labour, supervision, materials (except as indicated under Material Supplied by the City of Winnipeg), equipment, permits, coordination, testing, commissioning, temporary lighting, and restoration required to remove existing streetlighting infrastructure and install a complete decorative streetlighting system, including underground conduits and conductors, handholes, concrete bases, poles, roadway and pedestrian luminaires, grounding, kiosks, controls, and all associated appurtenances, in accordance with the Contract Documents and to the satisfaction of the City of Winnipeg.

E53.2.2 All work shall comply with the latest edition of the Canadian Electrical Code, applicable provincial and municipal regulations, City of Winnipeg standards, and the Contract Documents.

E53.2.3 The Contractor shall obtain all required permits, approvals, and inspections and shall pay all associated fees unless otherwise specified.

E53.2.4 All materials and equipment supplied shall be new and CSA approved unless otherwise approved by the City of Winnipeg.

E53.3 REFERENCES, CODES AND STANDARDS

E53.3.1 In addition to these Specifications, all work related to the removal, installation, and modification of streetlighting infrastructure shall comply with the following, as applicable.

(a) City of Winnipeg Standard Construction Specifications and Standard Details

(b) Canadian Electrical Code (CEC), Part I, latest edition

(c) CSA Standards, including CSA C22.3 standards for overhead and underground electrical systems, where applicable

(d) Manitoba Workplace Safety and Health Regulations

(e) Manitoba Hydro standards where interfacing with Hydro-owned infrastructure

(f) Contract Drawings and Special Provisions

E53.3.2 Where discrepancies or conflicts exist between these Specifications, the referenced standards, and applicable codes or regulations, the most stringent requirement shall govern.

E53.4 DEFINITIONS

E53.4.1 For the purpose of this Specification, the following definitions apply:

(a) CEC - Canadian Electrical Code (CEC), Part I, latest edition

(b) CONTRACT ADMINISTRATOR means the City of Winnipeg’s authorized representative responsible for contract administration, inspection, and acceptance of the Work.

(c) INSPECTION AUTHORITY means the authority having jurisdiction responsible for inspection and approval of electrical work.

(d) SUPPLY AUTHORITY means the electrical utility responsible for providing electrical service to the Project.

(e) ELECTRICAL CODE means the Canadian Electrical Code (CEC), Part 1, latest edition, unless otherwise specified.

(f) LIMITS OF APPROACH means the minimum permissible distance between live electrical conductors or apparatus and any part of a worker's body, tools, or equipment in accordance with applicable safety regulations.

(g) OVERHEAD FEED means a temporary electrical supply provided by overhead conductors installed between streetlight poles to maintain lighting service during construction.

(h) PROVIDE means supply, install, connect, test, and leave in complete working order.

E53.5 PERMITS, INSPECTIONS, AND FEES

E53.5.1 The Contractor shall obtain all required permits and approvals, coordinate and arrange all inspections, pay all associated fees, and comply with all utility locate and clearance requirements prior to and during construction.

E53.5.2 No electrical system shall be energized or accepted until the required inspection approvals have been received.

E53.6 QUALIFICATIONS AND CERTIFICATION

E53.6.1 The Contractor shall employ competent and properly trained personnel who possess the certifications, licensing, and experience required to safely and correctly perform the Work in accordance with applicable provincial regulations and the Canadian Electrical Code.

E53.6.2 All electrical work, including installation, termination, splicing, grounding, temporary power, and connection of streetlighting conductors and equipment, shall be performed under the supervision of, or directly by, Licensed Journeyman Electricians authorized to work in the Province of Manitoba.

E53.6.3 The Contractor shall comply with all requirements of provincial occupational health and safety legislation and shall ensure that all workers are trained in site-specific hazards and safe work procedures.

E53.6.4 Proof of licensing, certification, and training shall be provided to The City of Winnipeg/Contract Administrator upon request.

E53.7 COORDINATION OF WORK

E53.7.1 The Contractor shall coordinate the streetlighting works with all other trades and contractors, including roadway construction, surface restoration, landscaping, and underground utility works, to ensure proper sequencing, access, and timely completion of the Work without conflicts or damage to completed works.

E53.7.2 The Contractor shall provide a minimum of ten (10) working days' notice to The City of Winnipeg/Contract Administrator and Manitoba Hydro prior to commencing construction.

E53.7.3 The Contractor shall coordinate all work impacting existing Manitoba Hydro-owned infrastructure, including disconnection, isolation, temporary supplies, and permanent power connections, in accordance with Hydro requirements and approved schedules.

E53.7.4 Streetlighting service shall be maintained at all times throughout construction.

E53.7.5 The Contractor shall obtain all required clearances, permits, and utility approvals prior to performing work on or near energized systems. No additional compensation shall be paid for delays related to coordination or approvals.

E53.7.6 All Hydro-owned materials affected by the Work shall be handled, returned, salvaged, or disposed of in accordance with Manitoba Hydro and City direction.

E53.8 PRE-CONSTRUCTION MEETING

E53.8.1 Prior to commencement of the Work, the Contractor shall attend a pre-construction meeting with The City of Winnipeg/Contract Administrator and applicable utility representatives to review construction sequencing, safety procedures, coordination requirements, schedule, materials, and project drawings.

E53.8.2 The cost of attending and preparing for the pre-construction meeting shall be included in the Contract Unit Prices.

E53.9 EXAMINATION

E53.9.1 The Contractor shall examine the site, existing streetlighting infrastructure, surface conditions, and all related Work prior to commencement of construction.

E53.9.2 Any discrepancies, conflicts, or conditions that may affect the Work shall be reported to The City of Winnipeg/Contract Administrator before proceeding.

E53.9.3 Commencement of Work shall indicate acceptance of site conditions and existing infrastructure.

E53.10 SUPERVISION

E53.10.1 The Contractor shall supervise the Work at all times through a competent and qualified supervisor familiar with streetlighting construction practices and safety requirements.

E53.10.2 The Contractor shall coordinate fully with other trades, utility companies, roadway works, and surface restoration activities to ensure proper sequencing and avoid delays.

E53.11 SHOP DRAWINGS SUBMITTALS

E53.11.1 Submit shop drawings, product data, and manufacturer’s specifications for all major streetlighting components for review by The City of Winnipeg/Contract Administrator prior to installation, including but not limited to:

(a) Streetlight poles and arms

(b) Precast concrete bases and breakaway assemblies

(c) Luminaires and control devices

(d) Streetlighting power distribution kiosks

(e) Pull boxes

E53.11.2 Fabrication or installation of materials shall not proceed until required submittals have been reviewed and accepted.

E53.11.3 Submittals shall be provided electronically in PDF format unless otherwise directed.

E53.12 WORKMANSHIP

E53.12.1 All streetlighting work shall be executed in a neat, professional, and workmanlike manner in accordance with industry best practices, applicable codes, manufacturer’s requirements, and City standards.

E53.13 Conduits, conductors, poles, luminaires, kiosks, grounding systems, and associated equipment shall be installed true to line and grade, securely supported, properly aligned, and free of defects.

E53.14 Clearances, accessibility for maintenance, and protection from mechanical damage shall be provided as required.

E53.15 Any work deemed unsatisfactory by The City of Winnipeg/Contract Administrator shall be corrected by the Contractor at no additional cost.

E53.16 AS-BUILT DRAWING

E53.16.1 The Contractor shall maintain accurate and up-to-date as-built (record) drawings on site throughout construction and shall make them available for review at all site meetings and inspections.

E53.16.2 Upon completion of the Work and prior to final acceptance, the Contractor shall submit complete as-built drawings reflecting actual installed conditions of the streetlighting system, including but not limited to underground cables, conduits, handholes, poles, luminaires, kiosk, grounding system, circuiting, breaker assignments, and control equipment. As-built drawings shall be based on the latest Issued for Construction drawings and shall clearly indicate all deviations from the design, including horizontal and vertical alignment changes and revised quantities.

E53.16.3 As-built drawings shall be submitted in electronic AutoCAD format compatible with the City of Winnipeg's current version, together with a PDF copy. All layers, line types, and text shall conform to the City's CAD standards.

E53.16.4 Final inspection, authorization for permanent energization and operation, and release of final payment may be withheld by the City until acceptable as-built drawings have been submitted, reviewed, and approved by the Contract Administrator.

E53.17 TESTING AND COMMISSIONING

E53.17.1 The Contractor shall test all streetlighting circuits, luminaires, controls, grounding systems, and equipment to confirm proper operation prior to acceptance.

E53.17.2 All electrical testing shall conform to the requirements of the Canadian Electrical Code (CEC), Part I, and applicable City of Winnipeg standards.

E53.17.3 Testing shall be performed by qualified personnel. The Contractor shall provide all labour, instruments, and equipment required to carry out the testing at no additional cost.

E53.17.4 The following tests shall be performed prior to energization unless otherwise directed:

E53.17.5 Conduit Mandrel Test;

(a) All conduits shall be proven free of debris by pulling a test mandrel not less than 6.4 mm smaller than the nominal conduit diameter through each conduit run.

(b) Mandrel length shall be suitable for the conduit size and installation method.

E53.17.6 Continuity and Ground Fault Test;

(a) All circuits shall be tested to verify continuity and absence of short circuits or ground faults.

E53.17.7 Insulation Resistance Test;

(a) Insulation resistance of each circuit shall be tested using a 500 VDC megger. Insulation resistance shall not be less than 50 megohms.

E53.17.8 Grounding Test;

(a) Resistance to ground of each grounding electrode shall not exceed 25 ohms, unless otherwise permitted by the CEC.

E53.17.9 Any deficiencies identified during testing shall be corrected by the Contractor at no additional cost and the affected tests repeated until satisfactory results are achieved.

E53.17.10 Submit test reports (mandrel confirmation, megger results by circuit, grounding resistance results) to the City of Winnipeg/Contract Administrator prior to requesting final inspection/acceptance.

E53.17.11 Final acceptance of the streetlighting system shall be subject to satisfactory completion and documentation of all required testing, receipt of inspection clearance from the authority having jurisdiction, and approval by The City of Winnipeg.

E53.18 WARRANTY

E53.18.1 The Contractor shall warrant all electrical workmanship, materials, equipment, and streetlighting components installed under this Contract for a minimum period of twenty (24) months from the date of final acceptance by The City of Winnipeg.

E53.18.2 If any portion of the Work fails to comply with the requirements of this Specification, fails within the Warranty Period, or if final testing indicates the existence of any fault or defect in the Work or any part thereof, the City of Winnipeg may, upon written notice to the Contractor, require the Contractor to correct such deficiency at its own expense. Should the Contractor fail to promptly remedy the deficiency, the City may undertake the corrective work and recover the associated costs from the Contractor, and such costs may be deducted from monies otherwise due under the Contract.

E53.19 MATERIALS

E53.19.1 MATERIAL SUPPLIED BY THE CITY OF WINNIPEG

(a) The City of Winnipeg shall supply certain streetlighting materials including, but not limited to, streetlight poles, precast concrete bases, breakaway bases, luminaires, arms, grounding materials, cables, conduits, and associated appurtenances as identified in the Contract Documents.

(b) Materials shall be picked up by the Contractor from City of Winnipeg Stores or other designated locations as directed by The City of Winnipeg/Contract Administrator.

(c) The Contractor shall be responsible for loading, transportation, handling, secure storage, protection, and installation of all City-supplied materials and shall replace, at no additional cost to the City, any materials damaged, lost, or stolen due to improper handling, storage, or workmanship.

(d) At the time of material pickup, the Contractor shall verify quantities and condition and shall immediately report any shortages, discrepancies, or damage in writing to The City of Winnipeg/Contract Administrator.

(e) The Contractor shall monitor material usage and notify The City of Winnipeg/Contract Administrator of additional material requirements at least 72 hours in advance of need. No additional compensation shall be provided for delays resulting from failure to provide timely notice.

E53.19.2 MATERIAL SUPPLIED BY THE CONTRACTOR

(a) The Contractor shall supply all miscellaneous materials required to complete the Work including, but not limited to, granular bedding and backfill materials, sand, crushed limestone, protective sleeves or hose, duct seal, and restoration materials. All such costs shall be included in the Contract Unit Prices.

E53.19.3 CONTRACTOR-SUPPLIED TOOLS AND EQUIPMENT

(a) The Contractor shall provide all tools, equipment, and apparatus required to perform the Work. All equipment shall be in good operating condition, properly maintained in accordance with manufacturer’s recommendations, and provided with inspection or testing documentation when requested by The City of Winnipeg/Contract Administrator. Contractor-fabricated tools or equipment shall not be permitted unless approved in writing.

E53.20 SURPLUS, RECLAIM, AND SCRAP MATERIAL

E53.20.1 All new materials supplied by the City of Winnipeg and not incorporated into the Work shall be returned by the Contractor, at no additional cost, to the location designated by The City of Winnipeg/Contract Administrator.

E53.20.2 Existing streetlighting materials removed from the Work that are identified as Manitoba Hydro-owned assets, including but not limited to poles, luminaires, arms, bases, and associated equipment, shall be handled with care and returned to Manitoba Hydro or to a location designated by The City of Winnipeg/Contract Administrator, as directed.

E53.20.3 Materials deemed unsuitable for reuse shall be disposed of or recycled by the Contractor at approved facilities in accordance with applicable regulations. Any salvage value shall remain the property of the Contractor unless otherwise directed by The City of Winnipeg/Contract Administrator.

E53.20.4 The City of Winnipeg/Contract Administrator shall determine, in coordination with Manitoba Hydro where applicable, the classification and final disposition of surplus, reclaim, and scrap materials.

E53.21 MATERIAL HANDLING, STORAGE, AND PROTECTION

E53.21.1 The Contractor shall handle, transport, store, and install all materials in a manner that prevents damage, deformation, contamination, or deterioration.

E53.21.2 Electrical cables and conduits shall be handled using appropriate equipment and methods to prevent gouging, kinking, crushing, abrasion, or insulation damage. Damaged materials shall not be installed and shall be replaced at the Contractor’s expense.

E53.21.3 Precast concrete bases, poles, arms, luminaires, and appurtenances shall be handled, stored, and secured to prevent cracking, bending, corrosion, or mechanical damage.

E53.21.4 Precast Concrete Bases are extremely heavy. Approximate weight of pre-cast concrete bases are found in the Standards. The Contractor shall only use equipment rated for such weight.

E53.21.5 Cable reels shall be stored upright on firm surfaces and handled in accordance with manufacturer’s recommendations.

E53.21.6 Materials shall be placed and staged to minimize interference with traffic, pedestrians, and adjacent properties, and to allow inspection by The City of Winnipeg/Contract Administrator.

E53.22 BURIED UTILITY CROSSINGS

E53.22.1 All buried obstructions are not necessarily shown on the reference drawings and the locations of those indicated are approximate only.

E53.22.2 The Contractor shall determine the location of all buried obstructions and shall notify the appropriate authorities and obtain all necessary permits prior to excavation, trenching and directional drilling near or across such obstructions. All buried obstructions where the new buried cable route crosses other utilities including but not limited to gas, water, sewer, telephone and electric lines shall be exposed as per each utilities guidelines by the Contractor, including the use of Pressurized Water/Vacuum Equipment (PW/VE) where necessary. Should any damage occur to such lines during the course of the work, the Contractor shall be responsible for the damage and the costs of repairs to buried obstructions caused by its operations and shall fully indemnify the City of Winnipeg from and against all claims arising out of such damage. Manitoba Hydro Safe Excavation and Safety Watch Guidelines (latest revision) shall be followed when crossing natural gas pipelines and electrical cables by the directional boring method.

E53.22.3 The PW/VE technique, used to expose underground plant in certain conditions, must be performed in accordance with each utility's requirements, including but not limited to Manitoba Hydro, Manitoba Telecom Services, Shaw Cable, etc. PW/VE costs that the Contractor will incur during the work must be

factored into the Contractor's bid prices. The Contractor shall not be entitled to extra compensation for the use of PW/VE on the work.

E53.22.4 The Contractor shall be responsible to supply all backfill material and carry out all backfill, compacting and leveling of all excavations so as to be ready for topsoil and seed or sod or as directed by The City of Winnipeg/Contract Administrator.

E53.23 EXCAVATION

E53.23.1 The Contractor shall comply with all applicable occupational health and safety regulations and utility locate requirements.

E53.23.2 Pressurized water/vacuum excavation shall be used to expose existing underground utilities where mechanical excavation may pose a risk.

E53.23.3 The Contractor shall be responsible for preventing damage to all buried infrastructure and for restoration of any disturbed utilities.

E53.23.4 The Contractor shall supply all labour, equipment, and materials (except where noted under Materials Supplied by The City of Winnipeg) necessary to excavate and maintain the required line and grade for streetlighting conduits and cables, including dewatering and water control where required. Trenches shall be shaped to provide uniform support for the conduits and cables along their full length. All stones, debris, or materials that may damage cable jackets or conduits shall be removed. Where rock or unsuitable subgrade conditions are encountered, a minimum 150 mm layer of clean, well-compacted soil or ¼" down crushed limestone shall be placed to form a proper bedding. Excavated material shall be stockpiled so as not to enter the trench, interfere with drainage, damage property, or obstruct traffic.

E53.23.5 Trenches shall be excavated to provide a minimum cover of:

(a) 600 mm below final grade in non-vehicular (sodded/boulevard) areas

(b) 1000 mm below final grade in roadway areas

E53.24 BACKFILL

E53.24.1 All backfilling material within 300 mm of the conduits shall be clean, free of sod, vegetation, organic material, stones or other debris, and of a consistency as to not create significant voids or air spaces around the conduits. Other backfilling material shall be free of stones greater than 150 mm on their maximum dimension. Where cinders or very acid soil are encountered or where gravel or incompressible fill is required by Municipal authorities, ¼" down crushed limestone shall be placed all around the cables for a depth of at least 300 mm. The completed backfill shall be at least equal in compaction to undisturbed soil or as directed by The City of Winnipeg/Contract Administrator. Backfill material is to be placed and compacted in lifts not exceeding 300 mm. All excess material is to be removed by the Contractor.

E53.24.2 Tamping or flushing methods must be used where necessary to give the required compaction. Where tamping is used, hand tampers shall be used to at least 300 mm above the cable before machine tamping may be used. The Contractor shall level all excavations so as to be ready for topsoil and seed or sod or as directed by the The City of Winnipeg/Contract Administrator. Should settlement occur in the excavation and cause a depression in the surface, the Contractor shall repair the surface to the satisfaction of the City of Winnipeg/Contract Administrator at the Contractor's cost.

E53.24.3 Excavations remaining where poles have been removed shall be backfilled with spoil, pit run gravel or ¾" down limestone and compacted in lifts of 150mm as directed by The City of Winnipeg/Contract Administrator. The top 300 mm of the excavation shall be backfilled with topsoil.

E53.24.4 Excavations remaining where utility crossings have been exposed shall be backfilled with sand or clean spoil and compacted in lifts of 150mm. The top 300 mm of the excavation shall be backfilled with topsoil.

E53.24.5 Backfill of all excavations shall be in accordance with City of Winnipeg Standard Construction Specification CW 2030 (latest revision), to the satisfaction of the authority having jurisdiction and Manitoba Hydro.

E53.25 RESTORATION

E53.25.1 The Contractor shall restore all disturbed surfaces and infrastructure resulting from the Work, including but not limited to asphalt, concrete, sidewalks, decorative pavers, curbs, landscaping, tree pits, boulevards, and streetscape features, to equal or better condition than existed prior to construction and in accordance with City of Winnipeg standards and specifications. All restored areas shall be properly compacted and shall be subject to settlement correction for the duration of the warranty period at no additional cost to the City.

E53.26 DE-ENERGIZATION, ISOLATION, AND ELECTRICAL SAFETY

E53.26.1 Work in proximity to energized plant shall comply with the Limits of Approach established by the Supply Authority and applicable Manitoba workplace safety regulations. The Contractor shall obtain and brief all workers on the applicable Limits of Approach prior to commencing such work.

E53.26.2 All existing streetlighting infrastructure supplied by Manitoba Hydro shall be disconnected, isolated, and made electrically safe by Manitoba Hydro prior to any removal, modification, or work on energized components.

E53.26.3 The Contractor shall coordinate all required service disconnections, isolations, and reconnections with Manitoba Hydro and the City of Winnipeg/Contract Administrator in advance of construction activities.

E53.26.4 No work shall proceed on any pole, luminaire, cable, conduit, or electrical equipment until confirmation has been received that the associated electrical circuits have been de-energized or otherwise made safe in accordance with Manitoba Hydro requirements and applicable safety regulations.

E53.26.5 The Contractor shall implement site-specific safe work procedures, hazard assessments, and electrical safety controls in accordance with provincial occupational health and safety regulations.

E53.26.6 Where formal utility lockout is not provided by Manitoba Hydro, the Contractor shall implement approved safe work procedures and protective measures to ensure circuits are effectively isolated and safe for work.

E53.26.7 All time required for coordination with Manitoba Hydro for disconnection, isolation, and reconnection of electrical services shall be deemed included in the Contract Price.

E53.27 TEMPORARY STREETLIGHTING

E53.27.1 Where removal, relocation, or de-energization of existing streetlighting is required, Manitoba Hydro, through coordination by the City of Winnipeg/Contract Administrator, shall provide temporary lighting to maintain continuous roadway, pedestrian, and public safety illumination throughout the duration of construction.

E53.27.2 Temporary lighting systems shall be designed, supplied, installed, energized, operated, and maintained by Manitoba Hydro, through coordination by the City of Winnipeg/Contract Administrator, in accordance with applicable electrical codes, safety regulations, and Manitoba Hydro standards.

E53.27.3 Through coordination by the City of Winnipeg/Contract Administrator, Manitoba Hydro shall be responsible for all materials, equipment, power supply coordination, installation, inspection, maintenance, relocation, and removal of temporary lighting.

E53.27.4 Any outage or failure of temporary lighting shall be corrected by Manitoba Hydro through coordination by the City of Winnipeg/Contract Administrator.

E53.27.5 Temporary lighting shall remain in service until permanent streetlighting has been installed, tested, energized, and accepted.

E53.28 REMOVAL OF EXISTING STREETLIGHT POLE, ARM, LUMINAIRE, FOUNDATION, AND APPURTENANCES

E53.28.1 All work related to removal of existing streetlight poles, davit arms, luminaires, foundations, and associated appurtenances shall be completed by Manitoba Hydro through coordination with the Contract Administrator.

E53.28.2 Prior to removal of any existing streetlighting infrastructure, the Contract Administrator shall coordinate with Manitoba Hydro to arrange for disconnection, isolation, and de-energization of all electrical services supplying the streetlighting system.

E53.28.3 No work shall proceed on any pole, luminaire, cable, or foundation until confirmation has been received from Manitoba Hydro and acknowledged by the City of Winnipeg/Contract Administrator that the associated electrical circuits have been safely disconnected or otherwise made safe in accordance with applicable safety regulations and utility requirements.

E53.28.4 Streetlight poles may be mounted on precast concrete bases, cast-in-place concrete foundations, steel screw-in bases, or may be direct buried. Removal shall include the complete extraction of the pole and associated foundation unless otherwise directed by the City of Winnipeg/Contract Administrator.

E53.28.5 Manitoba Hydro shall furnish all labour, equipment, materials, and excavation required to complete the removals, including excavation by auger, pressurized water/vacuum excavation, hand methods, or other approved means suitable for site conditions, through coordination with the Contract Administrator.

E53.28.6 Care shall be taken to prevent damage to luminaires and reusable components where salvaging or reinstallation is required. Materials designated for reuse, reclaim, or disposal shall be handled and managed in accordance with the Specification and as directed by the City of Winnipeg/Contract Administrator.

E53.28.7 All excavations resulting from removals shall be backfilled with approved materials, compacted in successive lifts, and restored to match surrounding grades and surface conditions.

E53.28.8 All exposed, abandoned, or disconnected conductors shall be properly terminated, insulated, and secured in accordance with Manitoba Hydro requirements, applicable electrical codes, and City standards to prevent electrical hazards, moisture ingress, or damage to adjacent infrastructure.

E53.28.9 Surplus, salvageable, and scrap materials shall be transported, disposed of, or returned as directed by the City of Winnipeg/Contract Administrator.

E53.29 CONDUITS

E53.29.1 Underground conduits shall be RPVC or HDPE, sized and configured as shown on the Drawings, and installed in accordance with the Canadian Electrical Code (CEC), City of Winnipeg standards, and the Contract Documents.

E53.29.2 Conduits shall be installed true to line and grade, at the minimum cover and with the minimum separations shown on the Drawings and specified elsewhere in the Contract Documents. Where conflicts occur, the Contractor shall adjust alignment and depth as directed by the Contract Administrator.

E53.29.3 All conduit joints shall be made with manufacturer-recommended couplings and solvent cement, producing a watertight and mechanically secure joint. Split, cracked, ovalled, or damaged conduit and fittings shall not be installed.

E53.29.4 Provide long-radius sweeps at changes in direction unless otherwise shown. Conduit runs shall be installed to minimize bends and shall comply with manufacturer minimum bend radius requirements.

E53.29.5 Conduits shall be kept clean and free of water and debris during installation. Prior to cable pulling, each conduit run shall be proven clear using a mandrel (where specified) and/or swab, to the satisfaction of the Contract Administrator.

E53.29.6 Provide a continuous nylon pull string (minimum 400 N test) in every conduit, including spare/empty conduits. Leave a minimum 1.5 m of pull string coiled in each handhole/pull box and at pole/kiosk terminations.

E53.29.7 Conduit ends at handholes, pull boxes, pole bases, and the kiosk shall be sealed with approved duct seal after cable installation (and temporarily sealed during construction) to prevent water and debris ingress.

E53.29.8 Where warning tape is required, install red “CAUTION” tape continuously above the conduit alignment at the depth specified in the Contract Documents.

E53.30 HORIZONTAL DIRECTIONAL DRILLING (HDD) INSTALLATION OF CONDUITS

E53.30.1 Where shown on the Drawings or approved by the Contract Administrator, underground streetlighting conduits shall be installed by horizontal directional drilling (HDD).

E53.30.2 The Contractor shall excavate the entry and exit pits and any other openings necessary to install the boring equipment. The boring method and equipment shall be selected to minimize opening sizes and surface disturbance. The bore shall be straight, without unnecessary deviations, and shall be of a diameter only slightly larger than the outside diameter of the conduit or cable to minimize ground settlement. Cables and conduits shall be installed using approved pulling eyes or kellum grips in a manner that prevents mechanical damage.

E53.30.3 HDD installations shall conform to applicable City of Winnipeg standards, and NASTT Horizontal Directional Drilling Good Practices Guidelines (latest edition).

E53.30.4 Drilling fluids, spoil, and waste materials shall be managed and disposed of in a manner that minimizes environmental impact and complies with all applicable regulations.

E53.30.5 Conduits shall be installed to the alignments and minimum cover depths shown on the Drawings. Minimum cover beneath roadways shall be 1000 mm unless otherwise specified.

E53.30.6 During drilling operations, when crossing existing utilities or facilities, the Contractor shall assign a designated lookout to visually confirm that a minimum clearance of 300 mm is maintained, in accordance with Manitoba Hydro Safe Excavation and Safety Watch Guidelines (latest revision). Maximum pulling tensions on streetlighting cables shall not exceed 2.9 kN (0.65 kips) or the cable manufacturer’s recommended limits, whichever is more restrictive.

E53.30.7 Where the bore diameter exceeds the conduit diameter or voids are created, the annular space shall be pressure grouted with approved flowable fill to prevent settlement.

E53.30.8 Entry pits, exit pits, and all disturbed surfaces shall be backfilled, compacted, and restored in accordance with City standards.

E53.30.9 Upon completion, conduits shall be proven clean and unobstructed in accordance with the conduit testing requirements of this Specification.

E53.31 STREETLIGHTING CABLES

E53.31.1 Streetlighting conductors shall be copper, RW90 (or RWU90), 600 V rated, suitable for underground wet locations, and sized as shown on the Drawings.

E53.31.2 Cables shall be installed within conduits except where otherwise shown and shall be protected from mechanical damage during installation.

E53.31.3 Conductors shall be installed in conduit except where otherwise shown. Cable installation shall be performed using methods that prevent insulation damage, including use of proper pulling grips, rollers, lubricants, and adherence to manufacturer maximum pulling tension and minimum bending radius.

E53.31.4 Conductors shall be installed as continuous runs between pull boxes/handholes, pole bases, kiosks, and service points. Underground splicing is not permitted unless specifically approved in writing by the Contract Administrator.

E53.31.5 Maintain consistent circuit identification and phasing throughout the installation.

E53.31.6 Provide sufficient slack at poles, handholes/pull boxes, and the kiosk to permit proper termination and future maintenance. Excess conductor shall be neatly dressed/coiled without kinks, and handhole covers shall close without pinching conductors.

E53.31.7 Underground splicing of conductors shall not be permitted unless specifically approved in writing by The City of Winnipeg/Contract Administrator.

E53.31.8 The cost of all splicing and terminations shall be included in the applicable unit prices for cable installation and associated electrical work.

E53.31.9 Terminations shall be neat, mechanically secure, corrosion-resistant, and made with listed lugs/connectors suitable for conductor size and environment. Unused conductors shall be insulated, capped, and secured.

E53.31.10 Where service conductors are required between the Supply Authority point of connection and the streetlighting kiosk, conductor type, size, and tail length shall conform to Supply Authority requirements and the Drawings.

E53.32 ELECTRICAL PULL BOXES

E53.32.1 Electrical pull boxes shall be installed at the locations, elevations, and orientations shown on the Drawings and in accordance with City standards and manufacturer’s requirements.

E53.32.2 Units shall be properly bedded, aligned, connected to all associated conduits, backfilled, compacted, and restored to match surrounding grades and surfaces.

E53.32.3 Covers shall be set flush with adjacent finished surfaces, including sidewalks, boulevards, and paved areas, so as not to create tripping hazards or accessibility barriers.

E53.32.4 Where electrical pull boxes are installed in concrete surfaces, the Contractor shall provide concealed separation material or manufacturer-recommended installation method to accommodate differential movement between the structure and surrounding concrete. Finished surfaces shall be flush and free of gaps, offsets, or tripping hazards.

E53.32.5 All covers shall be traffic-rated where applicable and permanently marked or cast with the word “ELECTRICAL” unless otherwise directed by The City of Winnipeg/Contract Administrator.

E53.32.6 Pullbox covers shall be securely installed when work at the Pullboxl is complete and the Contractor is leaving the Site.

E53.33 PRE-CAST CONCRETE BASES

E53.33.1 Precast concrete bases shall be installed in accordance with the Drawings, manufacturer’s requirements, and City standards.

E53.33.2 The Contractor shall furnish all labour, materials, tools, and equipment necessary to complete the work, except as indicated in the Section “Material Supplied by The City of Winnipeg.

E53.33.3 The Contractor shall carry out all excavation required to install precast concrete streetlight foundations as shown on the Drawings. Excavation may be performed by auger, pressurized water/vacuum excavation, hand methods, or other approved means suitable for site conditions.

E53.33.4 Excavation shall be to the required diameter and depth necessary to accommodate the concrete base as shown on the Drawings. All surplus excavated material shall be removed from site in accordance with applicable regulations and by-laws for excess soil management.

E53.33.5 The precast concrete base shall be set on a compacted bedding layer of 19 mm (¾") down limestone or approved granular material. The base shall be installed level, properly aligned, and at the required elevation with final grade established prior to installation.

E53.33.6 Backfill material shall consist of 19 mm (¾") down limestone or approved granular material and shall be placed and compacted in successive lifts not exceeding 150 mm in thickness to prevent settlement. Compaction shall achieve a density equal to or greater than the surrounding undisturbed soil.

E53.33.7 Anchor bolt projection, spacing, orientation, and elevation shall be verified prior to concrete base placement and prior to pole installation.

E53.33.8 Underground conduits and cables entering the foundation shall be aligned with base openings and protected from abrasion and damage during installation. Cables shall be of sufficient length to extend into the handhole for proper termination.

E53.33.9 All excavations shall be leveled and restored to match surrounding grades and surfaces.

E53.33.10 Should settlement occur during the warranty period, the Contractor shall restore the affected area at no additional cost.

E53.33.11 Unless otherwise specified on the Drawings, poles shall be oriented so that the handhole faces away from traffic or as directed by The City of Winnipeg/Contract Administrator to allow safe maintenance access.

E53.33.12 Underground conduits and cables entering the foundation shall be aligned with base openings and protected from abrasion and damage during installation. Cables shall be of sufficient length to extend into the handhole for proper termination.

E53.33.13 All excavations shall be leveled and restored to match surrounding grades and surfaces.

E53.34 Should settlement occur during the warranty period, the Contractor shall restore the affected area at no additional cost.

E53.35 STREETLIGHT POLES AND ARMS

E53.35.1 Streetlight poles and arms shall be installed in accordance with the Drawings, manufacturer’s requirements, and City standards.

E53.35.2 Anchor bolts and mounting hardware shall be tightened evenly and torqued in accordance with manufacturer’s recommendations. Nut covers shall be installed where provided.

E53.35.3 Poles shall be installed plumb in all directions. Approved leveling shims may be used where required.

E53.35.4 Unless otherwise specified on the construction drawings, Poles shall be oriented so that the handhole is positioned on the left side of the pole when viewed from the roadway, allowing a worker to face oncoming traffic while accessing the handhole. Alternate orientations may be used if directed by The City of Winnipeg or the Contract Administrator to ensure safe maintenance access.

E53.35.5 Each new streetlight pole shall be fitted with a City-issued or City-approved identification tag indicating the assigned asset number. Tags shall be securely mounted at the location and height directed by The City of Winnipeg/Contract Administrator.

E53.35.6 Unless otherwise specified, excess underground cable and internal pole wiring shall be neatly coiled within the handhole with the cover installed.

E53.35.7 Where existing street signs or attachments are present, the Contractor shall remove and reinstall them on the new pole as directed.

E53.36 GROUNDING AND BONDING

E53.36.1 The complete streetlighting system shall be grounded and bonded in accordance with the Canadian Electrical Code (CEC), and the applicable Local Hydro Authority requirements.

E53.36.2 Grounding shall include, but not be limited to, ground rods where shown, bonding conductors installed within conduit systems, and bonding connections to all non-current-carrying metallic components including streetlight poles, luminaire housings, kiosk enclosures, handhole frames and covers, and other metallic equipment.

E53.36.3 A continuous insulated Copper grounding conductor shall be installed within the main conduit system and connected to the service grounding point or neutral at the streetlighting kiosk or service disconnect in accordance with the CEC and local utility requirements, unless otherwise shown on the Drawings.

E53.36.4 Luminaire fixtures shall be bonded to the grounding system using a minimum #12 AWG green insulated stranded copper bonding conductor.

E53.36.5 Grounding and bonding connections shall be made using listed mechanical grounding clamps, compression connectors, or other approved grounding devices suitable for the conductor size, material, and installation environment, including direct burial where applicable. All connections shall be secure, corrosion-resistant, and installed in accordance with the CEC and manufacturer’s recommendations.

E53.36.6 The Contractor shall ensure continuity of the grounding system throughout the installation and shall test grounding connections as required to confirm proper bonding and electrical safety.

E53.37 STREETLIGHT POWER DISTRIBUTION KIOSK

E53.37.1 The streetlighting power distribution kiosk shall be installed on the concrete base at the locations shown on the Drawings and connected to the electrical service, grounding system, and outgoing circuits in accordance with the Canadian Electrical Code (CEC), manufacturer’s requirements, and City standards.

E53.37.2 The kiosk and panelboard enclosure shall be minimum NEMA 3R rated for outdoor installation and suitable for local environmental conditions.

E53.37.3 All conductors shall be properly terminated, identified, and secured. Unused openings shall be sealed to maintain safety and enclosure integrity.

E53.37.4 Circuit breakers shall be bolt-on molded case type with a minimum interrupting rating of 10 kA symmetrical at the system voltage, unless otherwise noted on the Drawings.

E53.37.5 The kiosk shall include, as indicated on the Drawings: Main disconnect switch, Overcurrent protection for outgoing circuits, Neutral and grounding bus bars, Circuit identification labeling, Lighting contactor and/or control relay, Photocell, time clock, or lighting control equipment as specified.

E53.37.6 Provide a permanent, typewritten circuit directory securely affixed to the inside of the cabinet door clearly identifying each outgoing lighting circuit.

E53.37.7 All equipment and components shall be CSA certified and installed in accordance with the CEC.

E53.37.8 All components shall be CSA approved and suitable for the applied voltage and load.

E53.37.9 Provide grounding and bonding of the panelboard enclosure in accordance with the CEC.

E53.37.10 The Contractor shall verify correct connections and operation prior to energization.

E53.37.11 The Contractor shall obtain an inspection clearance / certificate of acceptance from the Inspection Authority prior to energization, and shall provide a copy to the Contract Administrator and Supply Authority.

E53.37.12 The installation of the power supply equipment and the power connection must be completed very early in the Contract to ensure that there is no delay to the traffic signal and illumination turn on. The Contractor shall communicate with the Local Hydro Authority early enough in the Contract to ensure that their requirements (i.e. permits and inspections) are satisfied and shall arrange for the earliest possible power connection.

E53.37.13 The Contractor shall leave sufficient wire coiled (as specified by the Local Hydro Authority) for the connection to the secondary supply/transformer. The wire from the hydro source of supply to the service shall be RWU90, rated 600 volts, unless otherwise specified by the local hydro authority. The cable shall be sized so as to satisfy voltage drop requirements of the electrical/electronic equipment and shall not exceed 3%.

E53.38 POLE RISER WIRING

E53.38.1 Pole riser wiring shall consist of all internal conductors installed within streetlight poles and arms required to supply roadway luminaires, pedestrian luminaires, decorative receptacles (where provided), and associated control devices, as shown on the Drawings.

E53.38.2 Pole Riser wiring shall include Two (2) No. 12 AWG RW90 copper insulated conductors; and One (1) No. 12 AWG green insulated stranded copper RW90 bonding conductor.

E53.38.3 Conductors shall be routed neatly within the pole and arm, protected from abrasion, and terminated within the pole handhole using approved connectors.

E53.38.4 Sufficient slack shall be provided to permit safe termination, maintenance, and replacement of equipment.

E53.39 BENDING CABLES/ CONDUITS AND INSTALLATION INTO STANDARDS

E53.39.1 It is desired to reduce to a minimum the required number of bends and to lay the cables/conduits to conform to the contour of the ground and maintain a normal covering. This shall be accomplished by cutting the trench slightly deeper in approaches to road crossings and drainage ditches. It is intended that the Contractor shall eliminate unnecessary bending by operating the trenching machine at various depths rather than by finishing grading the trench by hand whenever practical.

E53.39.2 Sharp bends of the cables/conduits shall be avoided at all times. All bends shall meet the requirements set out in this Specification. If excessive bending was exerted on any cable, the cable shall be replaced at the Contractor’s cost. During installation, under no circumstance is the cable to be subjected to a bending radius tighter than that detailed in the Standards. At street light poles the Contractor shall install the ends of the cables into the plastic pipe preinstalled in the concrete base. Care shall be taken to prevent damage to the insulation or jacket of the conductors. Underground cables entering the concrete base shall be protected by a length of protective hose supplied by the Contractor and by a layer of sand surrounding the cables to protect it from the limestone. The cable shall be left long enough to extend one (1) metre beyond the hand hole. The street light cable in the trench shall be installed in conduit for mechanical protection and the ends sealed with duct seal supplied by the Contractor. Care shall be taken to prevent damaging the cable where it exits the conduit. The conduit shall only be installed into the concrete base if conduit sizes make it practicable.

E53.39.3 Unless otherwise directed, excess underground cable and 2C-12 wire shall be left inside the hand hole with the hand hole cover loosely installed.

E53.40 LUMINAIRES AND ASSOCIATED WIRING

E53.40.1 Luminaires shall be installed in accordance with the Drawings, the City Standards and the manufacturer's instructions.

E53.40.2 Exterior luminaires and drivers shall be rated for cold-weather operation suitable for Winnipeg climatic conditions.

E53.40.3 All LED streetlighting luminaires shall have a minimum rated service life of 100,000 hours at L70 in accordance with IES TM-21 projections based on LM-80 test data, unless otherwise approved by The City of Winnipeg/Contract Administrator.

E53.40.4 All LED luminaires and drivers shall carry a minimum five (5) year manufacturer's warranty.

E53.40.5 All luminaires shall be securely mounted and properly aligned to maintain uniform appearance along the streetscape.

E53.40.6 The Contractor shall supply all labour, tools, and materials(except as indicated in the Section "MATERIAL SUPPLIED BY THE CITY OF WINNIPEG") necessary to install luminaires complete with associated internal wiring, as shown on the Drawings and in accordance with manufacturer's instructions.

E53.40.7 Unless otherwise specified, luminaires shall be installed with a tilt of zero (0) degrees.

E53.40.8 The Contractor shall install a length of two-conductor No. 12 AWG copper cable (2C-#12) from the luminaire terminal compartment, through the arm (where applicable), down the pole to the handhole. A minimum of one (1) metre of conductor shall be left within the handhole for termination.

E53.40.9 Luminaire mounting bolts shall be tightened in accordance with the manufacturer's recommended torque values. Impact tools shall not be used for tightening luminaire mounting hardware. The Contractor shall be responsible for any damage resulting from improper installation or over-tightening.

E53.40.10 As specified on the construction drawings, the luminaire will require either a photo electric cell (PEC) or shorting cap installed. When installing the PEC the eye shall be oriented north.

E53.40.11 Internal pole wiring, bonding, grounding, and control devices shall be properly connected prior to energization.

E53.40.12 connected load in accordance with the CEC.

E53.41 DECORATIVE RECEPTACLES

E53.41.1 Where receptacles are indicated on the Drawings, provide outdoor-rated, weather-resistant duplex type installed in cast metal FS boxes with weatherproof in-use covers.

E53.41.2 Receptacles shall be protected by ground fault circuit interrupters (GFCI) in accordance with the Canadian Electrical Code.

E53.41.3 Receptacles & Appurtenances shall be installed within streetlight poles as per Standard CD-315-24.

E53.41.4 Receptacles are intended for temporary decorative use only and shall be permanently labelled "DECORATIVE USE ONLY" (or as directed). Receptacle branch circuits shall be identified in the kiosk directory.

E53.41.5 Receptacle branch circuits shall be fused using 30A inline fuseholder fused at 15A, in accordance with CD315-24 Note 2.

E53.42 BREAK AWAY BASES

E53.42.1 If required break away bases shall be installed in accordance with Standard CD 300-10. The height of the concrete base above grade shall not exceed 50mm. The surface of the concrete base shall be flat and level. A reaction plate shall be installed between the concrete base and the break-away base.

E53.42.2 The Contractor shall torque the couplers in accordance with Standard CD 300-9. Impact tools shall not be used to tighten or torque couplers or nuts associated with a break away base.

E53.43 SPLICING/CONNECTING CABLES

E53.43.1 The electric cable shall be spliced/terminated as per Standards CD 215-12, CD 215-13, CD310-1, CD 310-4, CD 310-9 and CD 310-10 with the exception that the Contractor will use a GELCAP-SL-2/0 splice kit (See Appendix I). Termination in the hand hole may include the installation of an inline fuse holder.

E53.43.2 The Contractor shall furnish all labour, supplies and material (except as indicated in the Section " MATERIAL SUPPLIED BY THE CITY OF WINNIPEG") necessary to splice/terminate the street light conductor(s).

E53.44 LAYING CABLES

E53.44.1 Cables are to be lowered in the trench in an orderly fashion so as to maintain a consistent path and straight alignment. All cables shall be lowered in a continuous run (NO SPLICING) and in accordance with the construction drawings; and shall maintain the necessary separation, where required. All cables shall be of continuous runs and capped and sealed if they are not being installed in the pole at that time. Cables shall not be dragged over paved surfaces.

E53.44.2 Once a cable is cut its ends must be sealed immediately with an approved and appropriately sized, heat shrink or cold shrink sealing cap to prevent moisture ingress unless the cable is being installed in the pole at that time.

E53.44.3 During the removal of the cable, the reels shall be placed on jacks, stands or trailers with a bar through the arbour holes which will allow the reel to be turned easily, and the cable to be paid out. Cables can be paid out from the bottom or the top of the reel. Cable in coils shall be handled in a similar manner. This can be achieved by supporting the coil in a vertical plane and rotating it by hand as the cable is carefully uncoiled. The cable shall never be pulled over the flange of a reel, or pulled off the side of a coil, since this will introduce a twist in the cable.

E53.44.4 During installation, under no circumstance is the cable to be subjected to a bending radius tighter than that detailed in the Standards.

E53.44.5 Where specified in the Standards or on the construction drawings, the Contractor shall install the street light cable in a conduit.

E53.45 REEL HANDLING

E53.45.1 When off-loading reels from a truck, reels shall be lowered using a hydraulic gate, hoist or forklift truck. When a reel is rolled from one point to another, care must be taken to see that the reel does not straddle objects such as rocks, pipes, curbs or wooden blocks which could damage the cable or protective covering. A reel should always be rolled on hard surfaces to avoid sinkage and in the opposite direction to the cable wraps to ensure that the reel is rolled in such a direction as to tighten the cable on the reel.

E53.45.2 When using a hoist, install a mandrel through the reel arbour hole and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges. This will prevent bending of the reel flanges and damage to the cable.

E53.45.3 If a forklift is used to move a reel, the reel is to be approached from the flange side. Position the forks such that the reel is lifted by both reel flanges. The lift forks shall not contact the cable.

E53.45.4 Returnable reels shall be returned promptly to the City of Winnipeg and in no case later than three (3) days after the completion of the work unless otherwise mutually agreed between the Contractor and the City of Winnipeg.

E53.46 MEASUREMENT AND PAYMENT

E53.46.1 Installation of 50mm HDPE conduit(s) by boring method

(a) This pay item shall be measured on a linear meter basis and paid at the Contract Unit Price per linear meter for the installation of one or two 50 mm HDPE conduit(s) by boring method. The number of meters to be paid shall be measured horizontally along the conduit alignment between entry and exit points and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and full compensation for all labour, materials, equipment, drilling operations, excavation of entry and exit pits, buried utility crossings, use of pressurized water/vacuum excavation where required, restoration, and all work necessary to complete the work as specified.

E53.46.2 Installation of 50mm HDPE conduit by boring method complete with cable insertion (3-1C #8 AWG CU RWU90 C/W 1C #8 AWG CU RWU90 IGRD)

(a) This pay item shall be measured on a linear meter basis and paid at the Contract Unit Price per linear meter for the installation of a single 50 mm HDPE conduit by boring method complete with cable insertion. The number of meters to be paid shall be measured horizontally along the conduit alignment and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, drilling operations, excavation of entry and exit pits, buried utility crossings, use of pressurized water/vacuum excavation where required, restoration, and all work necessary to complete the work as specified.method. The number of meters to be paid shall be measured once horizontally along the conduit alignment and accepted by The City of Winnipeg/Contract Administrator. Individual conduits shall not be measured separately.

E53.46.3 Installation of 2 × 50 mm HDPE conduits by boring method each complete with cable insertion (3-1C #8 AWG CU RWU90 C/W 1C #8 AWG CU RWU90 IGRD)

(a) This pay item shall be measured on a linear meter basis and paid at the Contract Unit Price per linear meter for the installation of two 50 mm HDPE conduits by boring method complete with cable insertion. The number of meters to be paid shall be measured once horizontally along the conduit alignment and accepted by The City of Winnipeg/Contract Administrator. Individual conduits shall not be measured separately.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, drilling operations, conduit installation, cable installation, buried utility crossings, restoration, and all work necessary to complete the work as specified.

E53.46.4 Installation of 50 mm HDPE conduit by open trench method, complete with cable insertion (3-1C #8 AWG CU RWU90 C/W 1C #8 AWG CU RWU90 IGRD)

(a) This pay item shall be measured on a linear meter basis and paid at the Contract Unit Price per linear meter for the installation of a single 50 mm HDPE conduit by open trench method complete with cable insertion. The number of meters to be paid shall be measured horizontally along the conduit alignment within the trench and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, excavation, conduit installation, cable installation, backfilling, buried utility crossings, restoration, and all work necessary to complete the work as specified.

E53.46.5 Installation of 2 × 50 mm HDPE conduits by open trench method each complete with cable insertion (3-1C #8 AWG CU RWU90 C/W 1C #8 AWG CU RWU90 IGRD)

(i) This pay item shall be measured on a linear meter basis and paid at the Contract Unit Price per linear meter for the installation of two 50 mm HDPE conduits by open trench method complete with cable insertion. The number of meters to be paid shall be measured once horizontally along the conduit alignment and accepted by The City of Winnipeg/Contract Administrator. Individual conduits shall not be measured separately.

E53.46.6 Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, excavation, conduit installation, cable installation, backfilling, buried utility crossings, restoration, and all work necessary to complete the work as specified.

E53.46.7 Installation of Electrical Pull Box

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of an electrical pull box complete, as shown on the Drawings. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, excavation, base preparation, conduit connections, backfilling, restoration, and all work necessary to complete the work as specified.

E53.46.8 Installation of 15' decorative pole and precast concrete base including luminaire, wiring, and appurtenances

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of a 15' decorative pole complete with precast concrete base, luminaire, wiring, and appurtenances, as shown on the Drawings. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, excavation, pole and base installation, luminaire installation, wiring, restoration, conduit and cable entry, restoration, and all work necessary to complete the work as specified.

E53.46.9 Installation of 35’ Joint-Use Streetlight Pole with Roadway Luminaire, Pedestrian Luminaire, and precast concrete base, luminaires, and appurtenances

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of a 35’ joint-use streetlight pole complete, including precast concrete base with expanding pole key anchors, roadway luminaire, pedestrian luminaire, and associated appurtenances. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour materials, equipment, excavation, pole and base installation, luminaire installation, wiring, restoration, conduit and cable entry, restoration, and all work necessary to complete the work as specified.

E53.46.10 Installation of one (1) 10' ground rod

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of one (1) 10' ground rod complete, as shown on the Drawings. Ground rods shall be installed at every third street light, at the end of every street light circuit, and at other locations shown on the

Drawings. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, trenching of #4 ground wire up to 1 m, connections using hammerlock connectors, backfilling, restoration, and all work necessary to complete the work as specified.

E53.46.11 Installation of Streetlighting Power Distribution Kiosk, including concrete base, and appurtenances

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of a streetlighting power distribution kiosk complete, including concrete base and appurtenances, as shown on the Drawings. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, excavation, base preparation, mounting, wiring, grounding, testing, restoration, and all work necessary to complete the work as specified.

E53.46.12 Installation of Decorative Lighting Receptacle

(a) This pay item shall be measured on a unit basis and paid at the Contract Unit Price per unit for the installation of a decorative lighting receptacle complete, as shown on the Drawings. The number of units to be paid shall be verified and accepted by The City of Winnipeg/Contract Administrator.

(b) Payment shall be made at the Contract Unit Price and shall include full compensation for all labour, materials, equipment, wiring, fusing, grounding, mounting hardware, testing, and all work necessary to complete the work as specified.

E53.46.13 Connection to Power by Local Hydro Authority

E53.46.13 (a) The City will arrange connection to power by the Local Hydro Authority.

Add:	E55.	**Concrete Saw-Cut Detail**
	E55.1	The finished concrete pavement saw-cutting shall conform to Appendix ‘L’ which depicts SD-212.

DRAWINGS

Replace: 3-2026 _Drawing_P3596-24-R0 with 3-2026 _Addendum_2-Drawing_P3596-24-R1

Replace: 3-2026 _Drawing_D1000-18-R0 with 3-2026 _Addendum_2-Drawing_D17403-18-R1

Replace: 3-2026 _Drawing_D1000-19 with 3-2026 _Addendum_2-Drawing_ D17403-19-R1

Replace: 3-2026 _Drawing_D1000-20-R0 with 3-2026 _Addendum_2-Drawing_ D17403-20-R1

APPENDICES

Add:	Appendix_L	Concrete Saw-Cut Detail
Add:	Appendix M	Street Lighting and Pedestrian Lighting Design Drawings
Add:	Appendix N	Traffic Signal Preliminary Drawings